CLAIMS

What is claimed is:

1. An apparatus for shelling an investment casting pattern comprising:
a tank for containing a coating material;
means for holding the pattern immersed in the coating material; and
means for vibrating the pattern during immersion of the pattern.

2. The apparatus of claim 1 further comprising:
a pump coupled to draw a vacuum around the pattern.

3. The apparatus of claim 1 wherein:
the means for vibrating is mounted to the means for holding.

4. The apparatus of claim 1 in combination with:
the coating material being a zircon slurry.

5. An apparatus for shelling an investment casting pattern comprising:
a tank for containing a coating material;
a holding element for holding the pattern immersed in the coating material; and
a vacuum source coupled to the tank to withdraw air from at least one headspace of the tank.

6. The apparatus of claim 5 further comprising:
means for vibrating the pattern during immersion of the pattern.

7. The apparatus of claim 5 wherein:
a first said headspace is within a conduit containing the holding element and extending downward into the tank; and
a second said headspace is outside of the conduit.

8. The apparatus of claim 5 in combination with:
the pattern, the pattern comprising a ceramic core and a wax layer over at least part of the core.

9. A method for shelling an investment casting pattern comprising:
introducing the pattern to a vessel containing a coating material;
coating the pattern with the coating material; and
drawing a vacuum in the vessel proximate the pattern.

10. The method of claim 9 wherein:
the drawing includes a first drawing with an operative portion of the pattern above a surface level of the coating so as to rupture bubbles in coating material previously applied to the pattern.

11. The method of claim 9 further comprising:
rotating the pattern.

12. The method of claim 11 further comprising:
vibrating the pattern during the rotating.

13. The method of claim 9 wherein:
the vacuum is drawn from a headspace of a conduit partially immersed in the slurry.

14. The method of claim 9 wherein:
the drawing raises a level of the coating material in the vessel from a first height below an operative portion of the pattern to a second height above the operative portion of the pattern.

15. The method of claim 14 further comprising:
releasing said vacuum so as to drop said level; and
redrawing said vacuum, without immersing the operative portion, so as to encourage the busting of bubbles within a coating of said coating material on said operative portion.